



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,166	10/23/2003	Robyn Lee Focazio	AUS920030688US1	1938

45371 7590 04/18/2006

IBM CORPORATION (RUS)
c/o Rudolf O Siegesmund Gordon & Rees, LLP
2100 Ross Avenue
Suite 2600
DALLAS, TX 75201

EXAMINER

LIN, SHEW FEN

ART UNIT PAPER NUMBER

2166

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,166	Applicant(s) FOCAZIO ET AL.	
	Examiner Shew-Fen Lin	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/23/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/23/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

Detail Action

- a. This action is responsive to communications: application filed on 10/23/2003, IDS filed on 10/23/2003.
- b. Claims 1-39 are pending in this Office Action. Claims 1, 10, 17, 25, and 32 are independent claims.

Claim Rejections – 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV. B.2. (b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in i) below), or (B) be limited to a practical application within the technological arts.

Claim 1 in view of the above-cited MPEP section, are not statutory because they merely recite steps that can be performed by a person with pen and paper. The use of a computer or a data processor has not been indicated being used to perform the steps. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result a practical application producing a

Art Unit: 2166

concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101 nor is there a transformation of something physical to another state or thing.

Regarding claims 2-9 depend from rejected claim 1, comprise the same deficiencies as those claims directly or indirectly by dependence, and are therefore rejected on the same basis.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 recites the limitation "the added aliases list" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 2166

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Icetips Cowboy SQL Templates (Icetips Cowboy SQL Templates User's Guide, Version 6.0, February 20, 2003, hereinafter referred as ICST) in view of Evans et al. (US Publish 2004/0220917, hereinafter referred as Evans).

As to claim 1, ICST discloses a method for creating a query for a database (construct SQL statement to browse database, page 8, paragraph 3), wherein the method automatically prevents inclusion of an unnecessary table join in the query (Where clause option allows you to specify the necessary table join, page 22).

ICST discloses the elements of claims 1 as noted above but does not explicitly disclose preventing inclusion of an unnecessary table join in the query.

Evans discloses preventing inclusion of an unnecessary table join in the query (paragraph [0001], paragraphs [0015]-[0018]).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify ICST's disclosure to exclude a list of tables from table join as taught by Evans for the purpose of preventing execution of unnecessary joins (paragraph [0001], lines 1-4,

Art Unit: 2166

Evans). The skilled artisan would have been motivated to improve the invention of ICST per the above such that costly table joins can be minimized (paragraph [0013], Evans).

As to claims 2 and 17, ICST discloses determining whether a SQL template has a FROM clause placeholder (“after FROM before WHERE”, page 24, paragraph 4) and determining whether a FROM clause table has been previously specified in the SQL template (“after FROM before WHERE”, page 24, paragraph 4); responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, generating a FROM clause for the table (“after FROM before WHERE”, page 24, paragraph 4); determining whether the SQL template has a JOIN clause placeholder (“after WHERE before ORDER BY”, page 25, paragraph 1) and determining whether the FROM clause has been added (page 24, paragraph 4); and responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has been added, generating a JOIN clause (page 24, paragraph 4).

As to claims 3 and 18, ICST discloses responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, adding the FROM clause to a FROM clause string (in TABLENAMEQ, page 51); and responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, adding the JOIN clause to a JOIN clause string (store strings in WHERECLAUSE, page 52).

Art Unit: 2166

As to claims 4 and 19, ICST discloses generating a (join) WHERE clause (“WHERE clause”, page 22, paragraph 2); adding the (join) WHERE clause to a (join) WHERE clause string (update, page 22, paragraphs 2-4); adding an alias to an added aliases list (add alias, page 57, paragraph 1); and adding an optional where clause alias to an optional where clause aliases list (page 22, paragraph 2).

As to claims 5 and 20, ICST discloses determining if a plurality of parameters are on the added aliases list (list of fields supplied by the template, page 53, paragraph 4); and responsive to the determination that the parameters are not on the added aliases list, performing the steps in claim 2 (generate query string for the template as described in claim 2, page 21, paragraph 2, page 24, paragraph 4).

ICST discloses the elements of claims 5 as noted above but does not explicitly disclose determining whether the optional where clause alias is on the added aliases.

Evans discloses preparing a list of tables that are within the scope of the SQL but are not referred to by the SQL statement and exclude the tables for query (paragraphs [0015]-[0018]).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify ICST’s disclosure to exclude a list of tables from table join as taught by Evans for the purpose of preventing execution of unnecessary joins (paragraph [0001], lines 1-4, Evans). The skilled artisan would have been motivated to improve the invention of ICST per the above such that costly table joins can be minimized (paragraph [0013], Evans).

Art Unit: 2166

As to claims 6 and 21, ICST discloses generating a SELECT clause (page 24, paragraph 3); generating a (filter) WHERE clause (page 24, paragraph 4); and generating an ORDER BY clause (page 25, paragraph 2).

As to claims 7 and 22, ICST discloses responsive to the determination that all of the parameters have been analyzed, determining whether the optional where clause alias is on the added aliases list (check the expression in WHERE clause, page 22, paragraph 2); responsive to the determination that the optional where clause alias is on the added aliases, generating the (join) WHERE clause for the optional where clause alias (insert WHERE clause, page 22, paragraph 3); and responsive to the determination that the optional where clause alias is on the added aliases list, adding the (join) WHERE clause to the (join) WHERE clause string (AND/OR WHERE clause, page 22, paragraph 4).

As to claims 8 and 23, ICST discloses replacing the FROM clause placeholder in the SQL template with the FROM clause string (paragraph 24, lines 5); replacing the JOIN clause placeholder in the SQL template with the JOIN clause string (page 21, paragraph 2); and adding the (join) WHERE clause string to the (filter) WHERE clauses in the SQL template (insert to WHERE clause, page 21, paragraphs 2-3).

As to claims 9 and 24, ICST discloses accepting a user submission of a field and a filter (filter, page 18, paragraphs 2-4); sending the query to the database (construct SQL statement to

Art Unit: 2166

retrieve data, page 8, paragraph 3); and obtaining an output from the database (retrieve data, page 8, paragraph 3).

As to claims 10 and 25, ICST discloses a method of creating a query for a database (construct SQL statement to browse database, page 8, paragraph 3), wherein the method automatically prevents inclusion of an unnecessary table join in the query (Where clause option allows you to specify the necessary table join, page 22), the method comprising: determining if a plurality of parameters are on an added aliases list; responsive to the determination that the parameters are not on the added aliases list (list of fields supplied by the template, page 53, paragraph 4), running a clause generation program (generate query string for the template as described, page 21, paragraph 2, page 24, paragraph 4); determining if all of the parameters have been analyzed; responsive to the determination that all of the parameters have been analyzed, determining whether an optional where clause alias is on the added aliases list (check the expression in WHERE clause, page 22, paragraph 2); responsive to the determination that the optional where clause alias is on the added aliases list, generating a (join) WHERE clause for the optional where clause alias (insert WHERE clause, page 22, paragraph 3); and responsive to the determination that the optional where clause alias is on the added aliases list, adding the (join) WHERE clause to a (join) WHERE clause string (AND/OR WHERE clause, page 22, paragraph 4).

ICST discloses the elements of claims 10 as noted above but does not explicitly disclose preventing inclusion of an unnecessary table join in the query and determining whether the optional where clause alias is on the added aliases.

Art Unit: 2166

Evans discloses preventing inclusion of an unnecessary table join in the query (paragraph [0001], paragraphs [0015]-[0018]) and preparing a list of tables that are within the scope of the SQL but are not referred to by the SQL statement and exclude the tables for query (paragraphs [0015]-[0018]).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify ICST's disclosure to exclude a list of tables from table join as taught by Evans for the purpose of preventing execution of unnecessary joins (paragraph [0001], lines 1-4, Evans). The skilled artisan would have been motivated to improve the invention of ICST per the above such that costly table joins can be minimized (paragraph [0013], Evans).

As to claims 11 and 26, ICST discloses wherein the clause generation program comprises: determining whether a SQL template has a FROM clause placeholder ("after FROM before WHERE", page 24, paragraph 4) and determining whether a FROM clause table has been previously specified in the SQL template ("after FROM before WHERE", page 24, paragraph 4); responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, generating a FROM clause for the table("after FROM before WHERE", page 24, paragraph 4); determining whether the SQL template has a JOIN clause placeholder ("after WHERE before ORDER BY", page 25, paragraph 1) and determining whether the FROM clause has been added (page 24, paragraph 4); and responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, generating a JOIN clause page 24, paragraph 4).

As to claims 12 and 27, ICST discloses wherein the clause generation program further comprises: responsive to the determination that the SQL template has the FROM clause placeholder and that the FROM clause table has not been previously specified in the SQL template, adding the FROM clause to a FROM clause string (in TABLENAMEQ, page 51); and responsive to the determination that the SQL template has the JOIN clause placeholder and that the FROM clause has not been added, adding the JOIN clause to a JOIN clause string (store strings in WHERECLAUSE, page 52).

As to claims 13 and 28, ICST discloses wherein the clause generation program further comprises: generating the (join) WHERE clause ("WHERE clause", page 22, paragraph 2); adding the (join) WHERE clause to the (join) WHERE clause string (update, page 22, paragraphs 2-4); adding an alias to the added aliases list; and adding the optional where clause alias to an optional where clause aliases list (page 22, paragraph 2).

As to claims 14 and 29, ICST discloses generating a SELECT clause (page 24, paragraph 3); generating a (filter) WHERE clause (page 24, paragraph 4); and generating an ORDER BY clause (page 25, paragraph 2).

As to claims 15 and 30, ICST discloses replacing the FROM clause placeholder in the SQL template with the FROM clause string (paragraph 24, lines 5); replacing the JOIN clause placeholder in the SQL template with the JOIN clause string (page 21, paragraph 2); and adding

Art Unit: 2166

the (join) WHERE clause string to the (filter) WHERE clauses in the SQL template (insert to WHERE clause, page 21, paragraphs 2-3).

As to claims 16 and 31, ICST discloses accepting a user submission of a field and a filter (filter, page 18, paragraphs 2-4); sending the query to the database (construct SQL statement to retrieve data, page 8, paragraph 3); and obtaining an output from the database (retrieve data, page 8, paragraph 3).

As to claim 32, ICST discloses a program product operable on a computer, the program product comprising: a computer-usable medium; wherein the computer usable medium comprises instructions comprising: a query program, wherein the query program queries a database using a query (construct SQL statement to browse database, page 8, paragraph 3); a query generation program, wherein the query generation program generates a query having only the necessary joins for the query (generate query based on the parameters defined in the corresponding placeholder, pages 22-23); and a clause generation program, wherein the clause generation program determines which clauses are necessary in the query (generate WHERE clause, page 22, paragraphs 2-3, page 54).

ICST discloses the elements of claims 32 as noted above but does not explicitly disclose generating a query having only the necessary joins for the query.

Evans discloses generating a query having only the necessary joins for the query (paragraph [0001], paragraphs [0015]-[0018]).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify ICST's disclosure to exclude a list of tables from table join as taught by Evans for the purpose of preventing execution of unnecessary joins (paragraph [0001], lines 1-4, Evans). The skilled artisan would have been motivated to improve the invention of ICST per the above such that costly table joins can be minimized (paragraph [0013], Evans).

As to claim 33, claim 33 is essentially the same as claim 10 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 33 in the rejection of claim 10. Claim 33 is therefore rejected under the same rationale given to claim 10 above.

As to claim 34, claim 34 is essentially the same as claim 14 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 34 in the rejection of claim 14. Claim 34 is therefore rejected under the same rationale given to claim 14 above.

As to claim 35, claim 35 is essentially the same as claim 15 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 35 in the rejection of claim 15. Claim 35 is therefore rejected under the same rationale given to claim 15 above.

Art Unit: 2166

As to claim 36, claim 36 is essentially the same as claim 11 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 36 in the rejection of claim 11. Claim 36 is therefore rejected under the same rationale given to claim 11 above.

As to claim 37, claim 37 is essentially the same as claim 12 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 37 in the rejection of claim 12. Claim 37 is therefore rejected under the same rationale given to claim 12 above.

As to claim 38, claim 38 is essentially the same as claim 13 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 38 in the rejection of claim 13. Claim 38 is therefore rejected under the same rationale given to claim 13 above.

As to claim 39, claim 39 is essentially the same as claim 16 except that it sets forth the claimed invention as a computer program product rather than a method. Relevant teachings in the ICST and Evans have been identified for each of the steps of claim 39 in the rejection of claim 16. Claim 39 is therefore rejected under the same rationale given to claim 16 above.

Related Prior Arts

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Fast; Ronald Wayne, US 5664173 A, "Method and apparatus for generating database queries from a meta-query pattern", (... The meta-query defines an statement similar to the SQL language but includes query elements and query list elements used to generate a plurality of SQL test commands to be applied to the SQL database engine under test).
- Fenlon, Peter et al., US 20030093374 A1, "Internet-connected devices", (...provided a method of accessing a relational database from an embedded computing device by way of an appropriate set of commands, wherein the set of commands comprises an enumerable set of parameterised strings).
- Madan; Harpinder S. et al.,US 6748374 B1, "Method for generating a relational database query statement using one or more templates corresponding to search conditions in an expression tree", (...a method and system for generating a statement in a database query language to search or manipulate objects or entries that are stored in a relational database).
- Evans, Christopher et al.,US 20040220928 A1, "SQL predicate migration",(... A method of rewriting a Structured Query Language (SQL) statement in order to prevent processing of a join between a master table and a detail table in a database is described).

Art Unit: 2166

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2166
April 5, 2006

Shew-Fen Lin
Patent Examiner


MOHAMMAD ALI
PRIMARY EXAMINER